Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in this application.

Listing of Claims:

1. (currently amended) A two-stage optical amplifier comprising

a ~~1st~~ first stage comprising at least one optical amplifying unit, ~~and~~

a ~~2nd~~ second stage [[,]] ~~wherein each stage of said two stages comprises~~ comprising at least one optical amplifying unit,

~~the amplifier: being adapted for inserting OADM in~~

contacts disposed at a mid-stage ~~thereof~~ between said ~~two~~ first and second stages connectable to an OADM, and

a local control-communication circuit comprising a control-communication channel between said first and second stages that controls said first and second stages so as to allow ~~allowing~~ dynamic matching of at least one optical ~~characteristics~~ characteristic of one of said first and second stages to respective at least one characteristic of the other of said first and second stages, and ~~of the two stages, and being capable of leaving one of the stages to function in a regular regime~~ to prevent automatic shutting down of one of said first and second stages whenever the other of ~~the~~ said first and second stages is shut down.

2. (currently amended) The two-stage optical amplifier according to Claim 1, wherein:

~~said two~~ the first and second stages are preliminarily matched to one another ~~from the point of~~ on at least one optical ~~characteristics~~ characteristic so that

the first stage of the amplifier is preliminarily adjusted to match to a set of characteristics of the second stage,

the second stage of the amplifier is preliminarily adjusted to match to a set of characteristics of the first stage,

the first stage of the amplifier approximately matches a complementary stage of said amplifier or of another similar amplifier, and

the second stage of the amplifier approximately matches a complementary stage of said amplifier or of another similar amplifier; and

~~interconnected with one another by a~~ said control-communication channel interconnects the two stages with one another for controlling at least one parameter of either the first or second stage ~~the amplifying units~~, ~~from the following non-exhaustive list comprising~~ selected from the group consisting of: gain, gain flatness, and gain tilt.

3. (canceled)

4. (withdrawn) The amplifier according to Claim 1, comprising its 1st stage and its 2nd stage located at two separate modules, wherein the optical connection and the control-communication channel between the stages is arranged externally between said modules.

5. (withdrawn) A system comprising a pair of the two stage amplifiers according to claim 4, for respectively serving two opposite directions of optical transmission; in the system each of the separate modules accommodates the 1st stage of one said amplifier and the 2nd stage of the other said amplifier.

6. (currently amended) ~~A universal~~ The two-stage optical amplifier ~~assembly,~~ according to Claim 1, ~~comprising a 1st stage and a 2nd stage, each formed by at least one optical amplifying unit, said 1st and 2nd stages being preliminarily matched from the point of at least one optical characteristics,~~ wherein:

the two-stage optical amplifier further comprises at least one input and at least one output;

the first stage comprises at least one input and at least one output;

the second stage comprises at least one input and at least one output;

the at least one input of the ~~assembly~~ two-stage optical amplifier ~~being~~ is connected to the at least one input of the ~~1st~~ first stage,

the at least one output of the ~~2nd stage being connected to output of the assembly~~ two-stage optical amplifier is connected to the at least one output of the second stage,

the at least one output of the ~~1st~~ first stage and the at least one input of the ~~2nd~~ second stage are respectively connected to ~~a pair of mid-stage contacts~~ the contacts disposed at a mid-stage of the ~~assembly~~ two-stage optical amplifier, thereby allowing ~~introducing~~ the introduction of an optical element either between the ~~1st~~ first stage and the ~~2nd~~ second stage of the ~~universal assembly~~ two-stage optical amplifier, or between any of the stages of said ~~universal assembly~~ two-stage optical amplifier and a complementary stage of another similar ~~universal assembly~~ two-stage optical amplifier, and ~~the assembly also comprises a~~

the control-communication circuit is ~~capable of matching at least one optical characteristics of the assembly and of preventing shut down of one stage when the other is shut down~~ ~~, wherein said circuit being~~ arranged so as to be selectively configurable either to form [[a]] the control-communication channel between the ~~1st~~ first stage and the ~~2nd~~ second stage of said ~~assembly~~ two-stage optical amplifier, or to disconnect said ~~channel there between~~ first stage from said second

stage while enabling each of the ~~1st~~ first stage and the ~~2nd~~ second stage to form a separate control-communication circuit and control-communication channel with a complementary stage located on another similar ~~universal assembly~~ two-stage optical amplifier.

7. (currently amended) The ~~assembly~~ two-stage optical amplifier according to Claim 6, wherein:

the ~~1st~~ first stage and the ~~2nd~~ second stage are preliminarily matched so that the ~~1st~~ first stage of the ~~universal assembly~~ two-stage optical amplifier is preliminarily adjusted to match to a set of ~~average~~ characteristics designed for the ~~2nd~~ second stage, and

~~while~~ the ~~2nd~~ second stage of the ~~universal assembly~~ two-stage optical amplifier is preliminarily adjusted to match to a set of ~~average~~ characteristics designed for the ~~1st~~ first stage,

thereby any of the ~~1st~~ first stage and the ~~2nd~~ second stage of said ~~universal assembly~~ two-stage optical amplifier approximately matches to a complementary stage of said ~~universal assembly~~ two-stage optical amplifier or of another similar ~~universal assembly~~ two-stage optical amplifier.

8. (cancelled)

9. (currently amended) The ~~assembly~~ two-stage optical amplifier according to Claim 6, wherein:

the control-communication circuit is divided into two separate portions, and

each of said two separate portions is respectively suitable for being connected to corresponding separate portions of a control-communication circuit of another similar ~~universal assembly~~ two-stage optical amplifier, so as to form a control-communication channel between [[a 1st]] the first stage of ~~one assembly~~ the two-stage optical amplifier and a ~~2nd~~ second stage of the ~~other assembly~~ other two-stage optical amplifier, and ~~vice versa.~~ a control-communication channel between

the second stage of the two-stage optical amplifier and a first stage of the other two-stage optical amplifier.

10. (currently amended) The two-stage optical amplifier ~~implemented using a single universal assembly~~ according to Claim 6, wherein:

the ~~mid-stage~~ contacts ~~serving for~~ form a direct or indirect connection between the stages of ~~said universal assembly~~ the two-stage optical amplifier, and

the control-communication channel is formed between the stages of ~~said single universal assembly~~ the two-stage optical amplifier.

11. (withdrawn) A system of optical amplifiers for bi-directional optical transmission, wherein each of the two directions of optical transmission is served by the amplifier according to Claim 10.

12. (withdrawn) The two-stage amplifier implemented on two universal assemblies according to Claim 6, where 1st stage of one said assembly is directly or indirectly connected to 2nd stage of the other assembly, and the control-communication channel is formed between said stages of said different assemblies.

13. (withdrawn) A system for bi-directional optical transmission, comprising two optical amplifiers according to Claim 12, wherein each of the two directions of optical transmission is served by one said amplifier.

14. (original) A system comprising at least one two stage optical amplifier according to Claim 1,

further including an OADM connected in the mid stage.

15.-16. (cancelled)

17. (currently amended) The two-stage optical amplifier ~~assembly~~ according to ~~Claim 15~~ Claim 1, wherein:

the amplifier is located on one module, and

~~wherein~~ the control-communication circuit is provided with a micro controller having an ability to prevent shutting down ~~the other~~ one of the first or second stages when ~~one~~ the other of the first or second stages is to be shut down due to a failure detected at its side.

18.-20. (cancelled)